

**Patent claims**

1. A method for the monitoring of a manufacturing process of a plurality of physical objects,  
5       in which an analysis is performed by using values of at least one process parameter of the manufacturing process of the physical object;  
       in which, as a result of the analysis, when they satisfy a prescribed selection criterion, physical  
10      objects are marked in such a way that the associated physical objects can be taken as a random sample for the monitoring of the manufacturing process.
2. The method as claimed in claim 1, in which the  
15      physical object is a wafer.
3. The method as claimed in claim 1 or 2, in which the analysis is a statistical analysis.
- 20     4. The method as claimed in one of claims 1 to 3, in which the values of the at least one process parameter are measured when the physical object is being manufactured.
- 25     5. The method as claimed in one of claims 1 to 4, in which the physical objects of the random sample are subjected to a quality checking measurement for checking the quality of the respective physical object.  
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6. The method as claimed in claim 5, in which, for ascertaining the variation of the qualities of the physical objects, a physical object for which the value of the at least one process parameter has a

prescribed difference from the random sample is additionally subjected to a quality checking measurement.

- 5 7. The method as claimed in claim 1 or 6, in which the statistical analysis comprises the ascertainment of the median of the values of the at least one process parameter.
- 10 8. The method as claimed in claim 1 or 7, in which the statistical analysis comprises the ascertainment of the arithmetic mean value of the values of the at least one process parameter.
- 15 9. A device for the monitoring of a manufacturing process of a plurality of physical objects with a processor which is set up in such a way that the following method steps can be carried out:  
20 performance of an analysis by using values of at least one process parameter of the manufacturing process of the physical object;  
marking of physical objects when, as a result of the analysis, a prescribed selection criterion is satisfied, so that the associated physical objects can  
25 be taken as a random sample.
10. A computer-readable storage medium, in which a program for the monitoring of a manufacturing process of a plurality of physical objects is stored, which program has the following method steps when it is run by a processor:  
30 performance of an analysis by using values of at least one process parameter of the manufacturing process of the physical object;

marking of physical objects when, as a result of the analysis, a prescribed selection criterion is satisfied, so that the associated physical objects can be taken as a random sample.

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11. A computer program element for the monitoring of a manufacturing process of a plurality of physical objects, which has the following method steps when it is run by a processor:

10 performance of an analysis by using values of at least one process parameter of the manufacturing process of the physical object;  
marking of physical objects when, as a result of the analysis, a prescribed selection criterion is  
15 satisfied, so that the associated physical objects can be taken as a random sample.